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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/281,164	03/30/1999	KATSUHIKO NAGATA	1232-4527	6886

7590

10/05/2004

MORGAN & FINNEGAN L.L.P.
345 PARK AVENUE
NEW YORK, NY 10154

EXAMINER

TRAN, NHAN T

ART UNIT	PAPER NUMBER
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2615

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/281,164

Applicant(s)

NAGATA ET AL.

Examiner

Nhan T. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2004 and 27 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 24-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/22/2004 and 5/27/2004 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 24-28 have been considered but are moot in view of the new ground of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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3. Claims 24-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Onuma Takashi (JP 02-131226) in view of Kohno et al (US 5,029,991) and in further view of Walsh et al (US 5,848,253).

Regarding claim 25, Onuma discloses a lens device comprising:

a camera interface component (2, 3) that conforms a lens control signal to a predetermined data format (predetermined voltage and polarity for controlling a stop) of the lens device, wherein the lens device is attachable to plural cameras employing different data formats (voltages and polarities) for lens control signal (for controlling aperture stops), wherein the data formats differ by at least control voltage and polarity, and the lens control signal is received from the attached cameras (see Fig. 2 and Abstract).

Onuma does not explicitly show two different circuit boards that are employed for mounting plurality of components, i.e., 2-6 as shown in Fig. 2, for interfacing and controlling the lens device. Kohno teaches that since electrical components of varied kinds including among others electrical elements having large chip areas, such as a CPU, etc. are necessarily arranged in an interchangeable lens device, the use of a single printed circuit board hardly provides sufficient large space for mounting them. The use of two or more printed circuit boards has become necessary. Thus, two printed circuit boards (80 and 90) are employed for mounting camera interface components and other driving components to communicate with a camera and control the lens device. The two printed circuit boards are connected together through a communication line (82). See Kohno, col. 3, lines 33-61 and col. 4, line 45.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement in the lens device of Onuma a camera interface board that conforms a lens control signal to a predetermined data format of the lens device and a lens circuit board to control lens device, wherein the lens circuit board is connected with the camera interface board through a communication line, in an obvious arrangement of electrical components and circuit boards in the lens device by virtue of the teaching of Kohno.

Onuma and Kohno do not teach that the lens circuit board is connected with the camera board through a **serial** communication line. However, such an interconnect between printed circuit boards using serial bus or serial communication line is well known as taught by Walsh, col. 203, lines 10+.

Therefore, it would have been obvious to one of ordinary skill in the art to connect the lens circuit board to the camera interface board through a serial communication line to reduce the number of interconnect leads between the boards.

Regarding claim 26, Onuma also discloses that the lens control signal is iris control (aperture stop).

Regarding claim 27, it is clear in Onuma that the lens control signal is one of a digital signal and an analog signal (see Abstract).

Regarding claim 28, Onuma also discloses a camera code switch (8, 3) for switching an interface in the camera interface board in accordance with attached camera kind (see Abstract,

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wherein processing program of the arithmetic processing circuit 3 indicates digital environment that must contain digital codes).

Regarding claim 24, also disclosed is a camera connected to the lens device (see Onuma Figs. 1 & 2 and Abstract).

Conclusion

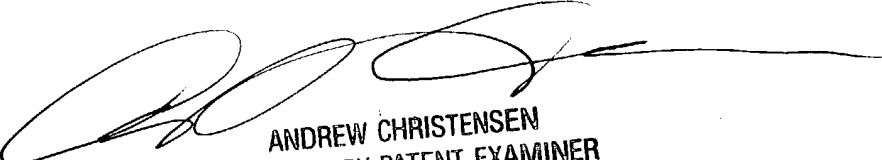
4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhan T. Tran whose telephone number is (703) 605-4246. The examiner can normally be reached on Monday - Thursday, 8:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew B Christensen can be reached on (703) 308-9644. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NT.

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A handwritten signature in black ink, consisting of a large, stylized 'A' followed by a series of loops and a long horizontal stroke extending to the right.

ANDREW CHRISTENSEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600